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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,636	06/27/2003	Lakdas Nanayakkara	1070.22	9870

7590 10/19/2004

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EXAMINER

LEE, JONG SUK

ART UNIT PAPER NUMBER

3673

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/609,636

Applicant(s)

NANAYAKKARA, LAKDAS

Examiner

Jong-Suk (James) Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The amendment filed September 1, 2004 has been entered.

#### *Claim Objections*

2. Claim 1 is objected to because of the following informalities:

Claim 1, line 18: "said [geo-] grid" should be -- said geo- grid --.

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application (JP 11-190026) in view of Nahayakkra (US 6,105,330).

Japanese Patent Application '026 discloses a retaining wall system comprising a y-axis footing having an x-axis width, the footing/lowest course embedded within the earth along a y-z plane at a base of an earth mass (2) to be retained by the system, the footing having a flat xy upper surface thereof; upon the upper surface of the footing, a retaining wall comprising a multiplicity of courses of constructional blocks (1), each block thereof defining a solid

rectangular exterior configuration (Fig. 2), an x-axis thereof defining a width axis of the wall, a y-axis thereof defining a segment of a length which one xz end surface of each block comprises opposing xz end surfaces, a part of a planar xy geo-grid/textile (3) positioned within at least one xy plane between the retaining wall and the earthen mass to be retained, a y-axis course of blocks of the retaining wall, in which elements of the geo-grid near to the y-axis edge defining x and y axes separations proportioned for complemental interposition between successive z-axis recesses (6a, 10a) and interlocking blocks of opposing z-axis course, securing the y-axis edge of the geo-grid being secured between adjacent z-axis course of blocks of the retaining wall (Fig. 1b, 9), mortar (16) placed between opposing xy surfaces of the blocks (Fig. 9b) to provide a rigid and load resistant interlock of each geo-grid between vertically contiguous courses of the block when joined together, a z-axis length of male members (1b) of the lower xy surface of each block exceeding a z-axis depth of the xy-surfaces recesses of t vertically contiguous course to thereby provide space for insertion of the mortar between opposing xy surfaces of blocks of the courses of the retaining wall as depicted in Fig. 9a-9b (see Figs. 1-9; English translated abstract).

However, Japanese Patent Application'026 fails to disclose or fairly suggest the opposing xz surface of the block having trapezoidal-shaped positive and negative y-axis deep key geometries being complementally interlockable and a having a depth and length in y-direction providing space for insertion of mortar between the opposing xz surfaces.

Nahayakkara'330 discloses a block for a retaining wall with Cartesian coordinating system comprising of opposing xz surfaces each having a trapezoidal-shaped positive y-axis deep geometry (20) and a negative y-axis deep geometry (18) which are interlocking between adjacent block (see Figs. 1-12; col.4, lines 8-67; col.1-67).

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Therefore, in view of Nahayakkara, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the block of Japanese Patent Application'026 with having y-axis deep geometries in order to enhance the reinforcement of the retaining wall in a horizontal direction too.

With respect to a y-axis length of the positive y-axis deep key geometry exceeding a y-axis depth of the negative deep key geometry for providing space for the insertion of mortar between opposing xz brick surfaces within a given course of the retaining wall, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide such a buffer space in order to place conventional bedding agent/mortar for the reinforcement between the blocks.

#### ***Response to Arguments***

5. Applicant's arguments filed September 1, 2004 have been fully considered but they are not persuasive.

With respect to the argument that the geo-textile of Japanese Patent Application'026 is different from "geo-grid" which is much stronger than the geotextile, it is not persuasive because the geo-textile and geo-grid are used as equivalents within the ordinary skill in the earth engineering field insofar as they are embedded into the backfilled earth for the retaining wall for the reinforcement. Further, the geotextile can be stronger than the geo-grid depending upon the material used in manufacturing.

With respect to the argument for Nanayakkara (US 6,105,330)'s block system does not use the geometry-specific rigid geo-grid for reinforcement of the retaining wall, it is not

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persuasive because Japanese Patent Application'026 was meant to be viewed in combination with Nanayakkara'330 and neither was meant to be viewed individually.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jong-Suk (James) Lee whose telephone number is (703) 308-6777. The examiner can normally be reached on 6:30 am to 3:00 pm, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford, can be reached on (703) 308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Lee /jjl  
October 15, 2004



**Jong-Suk (James) Lee**  
**Primary Examiner**  
**Art Unit 3673**